

Application No. 10/672035

January 18, 2006

YR

CLMPTO

1. (Currently Amended) A fuse arrangement comprising:

a first fuse having a first end and a second end; and

a second fuse having a first end and a second end[[],]; wherein:

wherein the first end of the first fuse is spaced by a first interval from the first end of the second fuse, and the second end of the first fuse is spaced by a second interval from the second end of the second fuse, the second interval being different than the first interval;

wherein the first ends of the first and second fuses have widths substantially the same as those of the second ends of the first and second fuses;

the first ends of the first and second fuses are disposed at a cutting region;

the first and second fuses have cutting portions at the first ends of the first and second fuses, the cutting portions being disposed in the cutting region; and

the cutting portions of the first and second fuses have widths substantially the same as portions of the first and second fuses outside the cutting region.

2. (Currently Amended) The fuse arrangement according to claim 1, wherein the first interval is wider than the second interval and the first ends of the first and second fuses are disposed at a cutting region.

3. (Currently Amended) The fuse arrangement according to claim 1, wherein the first and second ends of the first and second fuses are disposed in a row direction.

4. (Original) The fuse arrangement according to claim 2, wherein the first and second ends of the first fuse are connected in a straight line and the first end of the second fuse is laterally offset from the second end of the second fuse.

5. (Original) The fuse arrangement according to claim 4, further comprises a third fuse and a fourth fuse, the first and second fuses forming a first fuse group and the third and fourth fuses forming a second fuse group,

wherein the second fuse group is positioned such that the second fuse group is adjacent to the first fuse group and the second fuse group is rotated one hundred eighty (180) degrees from the first fuse group.

6. (Original) The fuse arrangement according to claim 2, wherein the first ends of the first and second fuses are vertically connected to the second ends of the first and second fuses, respectively.

7. (Currently Amended) A fuse arrangement comprising:
a first fuse having a first end and a second end connected in a straight line;
a second fuse having a first end and a second end connected in a straight line;
a third fuse having a first end spaced by a first interval from the first end of the first fuse and a second end spaced by a second interval from the second end of the first fuse, the first end of the third fuse being laterally offset from the second end thereof; and
a fourth fuse having a first end spaced by the first interval from the first end of the second fuse and a second end spaced by the second interval from the second end of the second fuse, the first end of the fourth fuse being laterally offset from the second end thereof; wherein:
the first ends of the first to fourth fuses have widths substantially the same as those of the second ends of the first to fourth fuses;
the first to fourth fuses are disposed at a cutting region;

the first to fourth fuses have cutting portions at the first ends of the first to fourth fuses,
the cutting portions being disposed in the cutting region; and
the cutting portions of the first to fourth fuses have widths substantially the same as
portions of the first to fourth fuses outside the cutting region.

8. (Currently Amended) The fuse arrangement according to claim 7, wherein the first ends of the first and third fuses are disposed parallel in one row direction and the firstsecond ends of the second and fourth fuses are disposed parallel in another row direction.

9. (Original) The fuse arrangement according to claim 7, wherein the first interval is wider than the second interval.

10. (Previously Presented) The fuse arrangement according to claim 7, wherein the first ends of the first and third fuses are disposed at a first cutting region formed along a first row and the first ends of the second and fourth fuses are disposed at a second cutting region formed along a second row.

11. (Currently Amended) A fuse arrangement comprising:
a first fuse group including a plurality of first fuses each having a first end and a second end, wherein the first ends of the first fuses are spaced from one another, the first and second ends of one of the first fuses are connected in a straight line, and the first ends of remaining ones of the first fuses become laterally offset from the second ends thereof; and
a second fuse group including a plurality of second fuses each having a first end and a second end, wherein the first ends of the second fuses are spaced by a first interval from one another, the second ends of the second fuses are spaced by a second interval from one another, the first and second ends of one of the second fuses are connected in a straight line, and the first ends of remaining ones of the second fuses are laterally offset from the second ends thereof[.].

wherein:

wherein the first and second fuses having the first and second ends connected in a straight line are disposed to encompass the remaining of the first and second fuses;

the first ends of the first and second fuses are disposed at a cutting region;

the first and second fuses have cutting portions at the first ends of the first and second fuses, the cutting portions being disposed in the cutting region; and

the cutting portions of the first and second fuses have widths substantially the same as portions of the first and second fuses outside the cutting region.

12. (Previously Presented) The fuse arrangement according to claim 11, wherein the first ends of the first fuses are disposed parallel in one row direction and the first ends of the second fuses are disposed parallel in another row direction.

13. (Previously Presented) The fuse arrangement according to claim 11, wherein the first interval is wider than the second interval, the first ends of the first fuses are disposed at a first cutting region formed along a first row, and the first ends of the second fuses are disposed at a second cutting region formed along a second row.

CLAIMS14-21 (CANCELLED)

22. (Currently Amended) A semiconductor memory device comprising:
an array of memory cells arranged in rows and columns;
a redundant array for replacing defective memory cells; and
a plurality of fuse boxes for storing defect addresses, respectively[.,] wherein:
wherein each fuse box includes a first fuse having a first end and a second end connected
in a straight line and a second fuse having a first end spaced by a first interval from the first end
of the first fuse and a second end spaced by a second interval from the second end of the first
fuse; and

wherein the first ends of the first and second fuses have widths substantially the same as
those of the second ends of the first and second fuses, the first ends of the first and second fuses
are disposed at a cutting region along a row direction, the first and second fuses have cutting
portions at the first ends of the first and second fuses, the cutting portions being disposed in the
cutting region, and the cutting portions of the first and second fuses have widths substantially the
same as portions of the first and second fuses outside the cutting region, the first end of the
second fuse is laterally offset from the second end of the second fuse.

23. (Original) The semiconductor memory device according to claim 22, wherein
each fuse box further comprises a second fuse group having third and fourth fuses, the second
fuse group is positioned such that a first fuse group of the first and second fuses is adjacent to the
second fuse group and the second fuse group is rotated one hundred eighty (180) degrees from
the first fuse group.

24. (Original) The semiconductor memory device according to claim 23, wherein the
third and fourth fuses are disposed to have the same structure as the first and second fuses.

CLAIMS 25-30 (CANCELLED)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)